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Tevatron measurements on SM Higgs

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We present the study of the SM Higgs properties obtained from the combined analysis of the up-to 10 fb-1 dataset collected by the CDF and D0 experiments during the ppbar collision at 1.96 TeV center-of-mass energy of Tevatron Run II. The observed local significance for the SM Higgs boson signal is of 3.0 sigma at mH=125 GeV. After a brief review of analysis channels contributing the most, where the Higgs boson decays to a pair of W bosons or to a pair of b-quarks jets, the signal production cross section and its coupling to fermions and vector bosons are analyzed. Other presented results are the recent study of the spin and parity of the SM Higgs performed by the D0 collaboration, leading to 3 sigma level exclusion of the JP=0- and JP=2+ hypothesis, and the investigation of exotics final states with invisible decay products of the Higgs, excluded by the CDF collaboration for masses below 120 GeV.

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